Serial Number: 09/782,743

Filing Date: February 13, 2003 Title: DUAL DOPED GATES

# IN THE CLAIMS

Page 2

Docket: 303.592US1

(Currently Amended) A method comprising:
 preparing a substrate with only PWELLs; and
 forming one or more dual gate structures including NWELLS in the substrate using only
 one mask.

- 2. (Original) The method of claim 1, wherein preparing a substrate comprises: forming a sacrificial oxide layer on a semiconductor.
- 3. (Currently Amended) The method of claim 1, wherein preparing a substrate with only <u>PWELLS</u> comprises:

forming a gate oxide layer on a semiconductor with only PWELLs; and forming a polysilicon layer on the gate oxide layer.

4. (Original) The method of claim 1, wherein forming one or more dual gate structures in the substrate using only one mask comprises:

forming a first gate structure having a first conductivity in the substrate, the first gate structure being formed using one or more blanket implants; and

forming a second gate structure having a second conductivity in the substrate, the second conductivity having a different value than the first conductivity and the second gate structure being formed using only one masking operation.

5. (Original) A method comprising:

preparing a substrate;

forming a first gate structure including a PWELL without using a mask; and forming a second gate structure including an NWELL using only one mask.

Page 3 Docket: 303.592US1

Serial Number: 09/782,743 Filing Date: February 13, 2003 Title: DUAL DOPED GATES

6. (Original) The method of claim 5, wherein forming a second gate structure including an NWELL using only one mask comprises:

forming a deep NWELL.

#### 7. - 8. (Canceled)

9. (Original) A method comprising:

preparing a substrate;

forming a first gate structure including a PWELL having a depth of about 200 nanometers without using a mask; and

forming a second gate structure including an NWELL using only one mask.

10. (Original) The method of claim 9, wherein forming a second gate structure including an NWELL using only one mask comprises:

forming a deep NWELL.

#### 11. - 35. (Canceled)

36. (Previously Presented) A method of forming one or more dual gate structures, the method comprising:

forming one or more gate structures including a PWELL without a mask; masking one or more PWELL regions; and

forming one or more gate structures including an NWELL in at least one of the one or more NWELL regions.

### 37. (Canceled)

Docket: 303.592US1

Page 4

Serial Number: 09/782,743 Filing Date: February 13, 2003 Title: DUAL DOPED GATES

38. (Previously Presented) A method of forming one or more dual gate structures, the method comprising:

forming one or more gate structures including a PWELL using blanket implants; masking one or more PWELL regions; and

forming one or more gate structures including an NWELL in at least one of the one or more NWELL regions.

39.-44. (Canceled)

- 45. (Previously Presented) The method of claim 1, preparing the substrate comprises forming a PWELL in an n-type substrate.
- 46. (Previously Presented) The method of claim 1, wherein forming one or more dual gate structures in the substrate using only one mask comprises forming one or more complementary metal-oxide semiconductor dual gate structures in the substrate using only one mask.
- 47. (Previously Presented) The method of claim 2, wherein forming the sacrificial oxide layer on the semiconductor comprises growing a sacrificial oxide layer to a depth of a few microns.
- 48. (Previously Presented) The method of claim 3, wherein forming the gate oxide layer on the semiconductor comprises forming the gate oxide layer having a thickness of between about five nanometers and about ten nanometers.
- 49. (Previously Presented) The method of claim 5, wherein preparing the substrate comprises forming a PWELL in an n-type substrate.

Serial Number: 09/782,743

Filing Date: February 13, 2003 Title: DUAL DOPED GATES Page 5
Docket: 303.592US1

50. (Previously Presented) The method of claim 5, wherein forming the first gate structure including the PWELL without using the mask comprises forming the PWELL by a blanket implant of boron ions at about 430 keV.

- 51. (Previously Presented) The method of claim 5, wherein forming the first gate structure including the PWELL without using the masking comprises forming the PWELL having a depth of about 200 nanometers.
- 52. (Previously Presented) The method of claim 5, wherein forming the first gate structure including the PWELL without using the masking comprises forming the PWELL having a blanket implant of boron ions at about 430 keV and a depth of about 200 nanometers.
- 53. (Previously Presented) The method of claim 49, wherein forming the first gate structure including the PWELL without using the mask comprises forming the PWELL by a blanket implant of boron ions at about 430 keV.
- 54. (Previously Presented) The method of claim 49, wherein forming the first gate structure including the PWELL without using the masking comprises forming the PWELL having a depth of about 200 nanometers.
- 55. (Previously Presented) The method of claim 9, wherein preparing the substrate comprises forming a PWELL in an n-type substrate.
- 56. (Canceled)

Serial Number: 09/782,743

Filing Date: February 13, 2003 Title: DUAL DOPED GATES

57. (New) A method comprising:

preparing a substrate with only NWELLs; and

forming one or more dual gate structures including PWELLS in the substrate using only one mask.

58. (New) The method of claim 57, wherein preparing a substrate with only NWELLs comprises:

forming a sacrificial oxide layer on a semiconductor.

59. (New) The method of claim 57, wherein preparing a substrate with only NWELLs comprises:

forming a gate oxide layer on a semiconductor with only NWELLs; and forming a polysilicon layer on the gate oxide layer.

Page 6

Docket: 303.592US1